

CLAIMS

REPLACED BY
ART 34 AMDT

1. A method of producing a heating element that is comprised essentially of molybdenum silicide type and alloys of this
5 basic material, c h a r a c t e r i s e d by producing a material that contains substantially $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ and Al_2O_3 by mixing a molybdenum aluminium silicide $\text{Mo}(\text{Si}_{1-y}\text{Al}_y)_2$ with SiO_2 , wherein the SiO_2 is at least 98% pure.
- 10 2. A method according to Claim 1, c h a r a c t e r i s e d in that the SiO_2 is present in silicates, wherein the remaining substances in the silicate have properties such that molybdenum silicide is unable to alloy with the substance or
15 substances concerned and such that the symmetry of the crystal lattice of the molybdenum silicide will be maintained.
3. A method according to Claim 1 or 2, c h a r a c t e r i s e d in that x is caused to lie in the range of 0.4 - 0.6.
- 20 4. A method according to Claim 1 or 2, c h a r a c t e r i s e d in that x is caused to lie in the range of 0.45 - 0.55.
5. A method according to Claim 1, 2, 3 or 4, c h a r a c -
25 t e r i s e d by substituting molybdenum partly with Re or W in the material $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$.
6. A electrical heating element that is comprised substantially of the molybdenum silicide type and alloys of this ba-
30 sic material, c h a r a c t e r i s e d in that said element is comprised chiefly of the materials $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ and Al_2O_3 , wherein SiO_2 having a purity of at least 98% is added during the production process.

7. A heating element according to Claim 5, characterised in that x lies in the range of 0.4 - 0.6.

5 8. A heating element according to Claim 7, characterised in that x is caused to lie in the range of 0.45 - 0.55.

9. A heating element according to Claim 5, 6, 7 or 8,
10 characterised in that molybdenum in the material $\text{Mo}(\text{Si}_{1-x}\text{Al}_x)_2$ is replaced partially with Re or W.